

I was very much surprised to find in one of my hauls with the dredge, a number of very perfect specimens of *Turbonilla interrupta* Totten, associated with *Odostomia interrupta* Say, and also *Nucula proxima* Say.

One of the most abundant Mollusks of the South seems to be *Melongena corona* Gmel. This shell is to be found upon the salt marshes (Savannas) in great numbers, and of all sizes from a half inch in length to over four inches, and through all degrees of perfection. I collected one day in a single hour 360 of these shells comprising one of the finest series of this mollusk that could be imagined. I noticed among them a number of specimens having a double row of spines, all the way around the whorls. This variety has been named *bispinosa* by Philippi but the characters are not constant and the name therefore does not stand.

SUMMER STUDIES IN CONCHOLOGY.

BY PROF. JOSIAH KEEP.

For several years past a class in Conchology has been connected with the Chautauqua Assembly at Pacific Grove, Monterey, Cal. This Assembly meets annually about July 1, and continues its sessions for the space of two weeks. During this time there are numerous lectures, concerts, and other intellectual exercises, many of which are of a high grade of excellence. Such a programme, given at this delightful watering place, naturally attracts many visitors beside those who are engaged in the regular Chautauqua course of studies. The past season has been no exception, but the interest has been deeper and the attendance larger than on any previous occasion.

The science classes were mostly held at nine o'clock in the morning, and were followed by a public lecture. Excursions to the beach were made at various times, particularly in the early morning, in order to take advantage of the very low tides which occur then, about the time of the new and the full moon.

The class in Conchology was no respecter of persons in regard to age or occupation. Around the tables on which our shells were spread were seated matrons with gray hair, boys and girls, young men and women, ministers of the gospel, teachers from our schools, here a young man from the farm, and beside him a mother leaving

for a little the duties of home. Perhaps in all the country, a similar class with a similar object could not be found.

And that object was the study of mollusks, particularly those species which were to be found in the immediate vicinity. Not so much a critical examination and discussion of the fine points of difference between similar species, but first of all a study of the structure and nature of the soft parts of the animal, then the mode of growth of the shell, the names of its parts, and its general morphology. After this, as far as time permitted, a study of the local species, and of others which have their home on adjacent parts of the coast. The apparatus was of the simplest kind. One morning a quantity of limpets were brought in for examination. Some were put into jars of sea-water and their motions observed. Others were deprived of life by a fresh-water bath, and distributed around the tables. After an examination of the foot, mantle, head, etc., penknives were used to slit the head, and common pins were employed to dissect out the buccal mass. A microscope was at hand to show the sharp teeth, and many were the expressions of surprise and interest in connection with the whole lesson. Valuable suggestions were made by members of the class, and many cabinets of shells were begun or received additions.

After a start had been made, the writer's book, "West Coast Shells," was freely used. Descriptions were read, engravings examined, and pronunciations recommended. On the tables were spread numerous examples of dry shells, many of them imperfect, just as they had been gathered from the beach. From these mixed piles the members of the class drew out specimens of the shell under consideration at any particular time, and were given such hints and directions as would tend to fix its main features in the mind, and guard them on the one hand from confounding it with similar species, and on the other from separating it from its brethren on account of mere varietal differences.

The two weeks of study passed all too quickly, but even in that brief time good results were obtained. Not results of a critical nature, not important contributions to the science; very few have the ability or the opportunity to accomplish these. But our science ought not to be simply for the scholar and the specialist. The people in the common walks of life have a keen sense of the beautiful, and the interesting features of common objects have but to be pointed out to be appreciated. Life is made more rich and full as

new admiration is evoked, and what is better fitted to call it forth than a careful study of the beautiful objects of nature. Moreover, observation is quickened, interest aroused, and knowledge is increased. The danger which lies in the spread of popular science is not found in the contemplation of real facts and real objects, even if they are studied but slightly; it must be sought, rather, in the substitution of fancies for facts, and a superficial reading or hearing about things instead of an examination of the things themselves.

Among other good results of the session was the formation of a club of subscribers for THE NAUTILUS, with the prospect of additional names in the future, as its merits become known.

THE SHELL-BEARING MOLLUSCA OF RHODE ISLAND.

BY HORACE F. CARPENTER.

FAMILY LUCINIDÆ.

This family contains about one hundred and fifty species, distributed chiefly in the tropical and temperate seas, on muddy and sandy bottom from low water to the deepest water inhabited by the mollusca. Several of the genera are entirely fossil.

Genus *Lucina*, Brug., 1792.

There are two hundred and fifty fossil species and one hundred living. Distribution universal.

179.—*Lucina* (*Cyclas*) *dentata*., Wood, 1817.

Syns.:

Lucina divaricata, Gld. Iam. non Linné. *L. strigilla*, Stimp., *L. americana*, C. B. Adams, *L. chemnitzii*, Phil., *L. lamarekii*, Dunker, *L. eburnea*, Reeve, *L. Pilula*, C. B. Adams, *L. ornata*, Reeve, *L. quadrisulcata*, D'Orb., *Pectunculus parvus*, Lister, *Tellina divaricata*, Gmel. Chemn. Dillw. Turton, *Cyclas dentata*, Dall, Tryon, Verrill, etc.

Shell white, thin, orbicular, convex, sub-equipartite; beaks central, elevated, inclined forward; surface glossy and sculptured in a very peculiar manner, with grooves bent obliquely downwards from a line drawn, not through the center, but from a point at the anterior third; they extend to the margins and crenulate the